

IN THE CLAIMS

The following listing of claims replaces all previous versions.

1. (Currently Amended) A system for wireless communication utilizing a first wireless band and a second wireless band, comprising:

a first wireless access point device including a first dual-band wireless transceiver and a smart antenna, the first wireless access point device being configured to use ~~using~~ the smart antenna to uni-directionally transmit ~~uni-directionally transmitting downstream~~ payload data to wireless mobile unit devices exclusively on the first wireless band during a time period, without having to reserve the first wireless band prior to transmission and without sensing for communication activity on the first wireless band prior to transmission;

a ~~first second~~ wireless mobile unit device including a second dual-band wireless transceiver, the ~~first second~~ wireless mobile unit device being configured to omni-directionally transmit its upstream acknowledging reception of the payload data to the wireless access point exclusively using at least one of the first wireless and second wireless bands ~~band~~ by omni-directionally transmitting acknowledgement data during the time period; and

a ~~second third~~ wireless mobile unit device including a third dual-band wireless transceiver, ~~the second wireless mobile unit device~~ being configured to omni-directionally transmit its upstream payload data to the first wireless access point device exclusively on the second wireless band during the time period and simultaneously with the transmission of the downstream payload data by the first wireless access point device.

2. (Currently Amended) The system according to claim 1, wherein the ~~second~~ first wireless mobile unit device omni-directionally transmits ~~further its upstream~~ payload data using only the second wireless band, the ~~second~~ first wireless mobile unit device reserving the second wireless band prior to transmission of ~~the further its upstream~~ payload data.

3. (Previously Presented) The system according to claim 1, wherein the first wireless band is a 5 GHz band and the second wireless band is a 2.4 GHz band.

4. (Currently Amended) The system according to claim 1, wherein prior to uni-directionally transmitting the downstream payload data to the first wireless mobile unit device via the first wireless band, the ~~first~~ wireless access point device determining location of the ~~second~~ first wireless mobile unit device.

5. (Cancelled)

6. (Currently Amended) The system according to claim 2, wherein the uni-directional transmission of the downstream payload data from the ~~first~~ wireless access point device to the ~~second wireless device~~ via the first wireless band and the omni-directional transmission of the ~~further~~ respective upstream payload data from the ~~second~~ first wireless mobile unit device to the ~~first~~ wireless access point device via the second wireless band are simultaneous.

7. (Cancelled)

8. (Cancelled)

9. (Currently Amended) A method for wireless communications, comprising:

- a) uni-directionally transmitting respective downstream payload data by a ~~first~~ wireless access point device to a plurality of second wireless mobile unit devices exclusively ~~device~~ using a first band during a time period, the ~~first~~ wireless access point device using a smart antenna for the transmission of the downstream payload data, the ~~first~~ wireless access point device transmitting the downstream payload data without having to reserve the first band and without sensing for communication activity on the first band prior to transmission;
- b) after the step a, omni-directionally transmitting upstream acknowledgment data, during the time period, by the ~~second~~ a first wireless mobile unit device to acknowledge receipt of the downstream payload data using at least one of the first and second band; and
- c) simultaneously with step a, and during the time period, transmitting ~~second~~ upstream payload data by a ~~third~~ second wireless mobile unit device to the ~~first~~ wireless access point device exclusively on the second band.

10. (Currently Amended) The method according to claim 9, further comprising:  
omni-directionally transmitting further upstream payload data by the ~~second~~ first  
wireless mobile unit device to the ~~first~~ wireless access point device using the second band, the  
~~second~~ first wireless mobile unit device having reserved the second band prior to transmission  
of the further upstream payload data.

11. (Previously Presented) The method according to claim 9, wherein the first band  
is a 5 GHz band and the second band is a 2.4 GHz band.

12. (Currently Amended) The method according to claim 9, further comprising:  
prior to uni-directionally transmitting the downstream payload data to the first wireless  
mobile unit device via the first band, determining a location of the ~~second~~ first wireless mobile  
unit device.

13. (Cancelled)

14. (Currently Amended) The method according to claim 9, wherein the uni-  
directional transmission of the downstream payload data from the ~~first~~ wireless access point  
device to the ~~second~~ first wireless mobile unit device via the first band and the omni-directional  
transmission of the ~~further~~ upstream payload data from the ~~second~~ first wireless mobile unit  
device to the ~~first~~ wireless access point device via the second band are simultaneous.

15. (Original) The method according to claim 14, wherein coverage areas of the  
corresponding uni-directional and omni-directional transmission are substantially similar.

16. (Currently Amended) A wireless access point device, comprising:  
a dual-band wireless transceiver capable of wirelessly transmitting using first and second  
wireless bands; and  
a smart antenna,

wherein respective downstream payload data is uni-directionally transmitted to a plurality of wireless mobile unit devices during a time period using the smart antenna and exclusively on the first band without having to reserve the first band prior to the transmission of the downstream payload data and without sensing for communication activity on the first band prior to transmission;

wherein second upstream payload data is simultaneously received from a plurality of wireless mobile unit devices during the time period using the smart antenna and exclusively on the second band; and

~~wherein the transceiver omni-directionally transmits further payload data on the second band having reserved the second band prior to transmitting the further payload data.~~

17. (Cancelled)

18. (Previously Presented) The device according to claim 16, wherein the first band is a 5 GHz band and the second band is a 2.4 GHz band.

19. (Currently Amended) The device according to claim 16, wherein prior to uni-directionally transmitting the downstream payload data via the first band, the device determines a location where the downstream payload data is to be transmitted.

20. (Cancelled)

21. (Cancelled)

22. (Previously Presented) A method for wireless communications, comprising:  
a first wireless device transmitting downstream payload data addressed to a destination wireless device exclusively using a high frequency band during a time period, the downstream payload data being transmitted as a plurality of sequential downstream data transmissions, the first wireless device transmitting the downstream payload data without having to make preparatory transmissions to reserve the high frequency band prior to transmission;

during the time period and between two of the sequential downstream data transmissions, the first wireless device receiving respective upstream payload data from at least one additional wireless device exclusively using a low frequency band that does not overlap the high frequency band.

23. (Previously Presented) A method according to claim 22, further comprising:  
during the time period and between two of the sequential downstream data transmissions, the first wireless device receiving upstream acknowledgment data from the destination wireless device, the upstream acknowledgement data acknowledging receipt of downstream payload data by the destination wireless device; and

during the time period and between two of the sequential downstream data transmissions, the first wireless device transmitting downstream acknowledgement data to the at least one additional wireless device, the downstream acknowledgment data acknowledging receipt of the upstream payload data by the first wireless device.